DRAFT

In Fig. 3b, a unit consisting of ~~four~~ eight assay units depicted in Fig. 3a is shown. The unit 350b employs a reagent constituent comprising a reagent reactor 302b, particularly in the present illustration, a PCR reactor, a capture bead reservoir 308b, a buffer reservoir 312b, connected together through delivery channel 304b and side channels 306b and 310b. The delivery channel 304b feeds the amplified DNA from the PCR reactor 302b partially bound to the beads from bead reservoir 308b to eight different assay units ~~300b~~ 300, as shown in Fig. 3a ~~present as four half-units 352b~~. Considering only one of the assay units in view of the symmetry of the system, labeled probe reservoir 314b feeds labeled probe through side channel 316b into delivery channel 304b to bind to DNA captured by the beads from bead reservoir 308b. The beads with the sample DNA and labeled probe, if the assay is positive, are captured by the bead trap 318b. The labeled probe is then released from the beads and transported to the delivery channel 304b and assay channel 322b cross-intersection 324b. The labeled probe is injected into the assay channel 322b by means of buffer from buffer reservoir 326b and the electrical field provided by electrodes in buffer reservoir 326b and waste reservoir 328b. A detector ~~330b~~ detects the passage of the labeled probe through the assay channel 322b.